1. An integrated circuit device comprising:

a chip carrier with an integrated circuit die fixably attached to said chip carrier; and

an antenna structure molded onto said chip carrier and comprising a conductive loaded, resin-based material comprising conductive materials in a base resin host.

2.The device according to Claim 1 wherein the ratio, by weight, of said conductive materials to said resin host is between about 0.20 and about 0.40.

3.The device according to Claim 1 wherein said conductive materials comprise metal powder.

4.The device according to Claim 3 wherein said metal powder is nickel, copper, or silver.

5.The device according to Claim 3 wherein said metal powder is a non-conductive material with a metal plating.

6.The device according to Claim 5 wherein said metal plating is nickel, copper, silver, or alloys thereof.

7.The device according to Claim 3 wherein said metal powder comprises a diameter of between about 3 μm and about 12 μm.

8. The device according to Claim 1 wherein said conductive materials comprise non-metal powder.

9. The device according to Claim 8 wherein said non-metal powder is carbon, graphite, or an amine-based material.

10.The device according to Claim 1 wherein said conductive materials comprise a combination of metal powder and non-metal powder.

11.The device according to Claim 1 wherein said conductive materials comprise micron conductive fiber.

12.The device according to Claim 11 wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof.

13.The device according to Claim 11 wherein said micron conductive fiber has a diameter of between about 3 μm and

about 12 μm and a length of between about 2 mm and about 14 mm.

14.The device according to Claim 1 wherein said conductive materials comprise a combination of conductive powder and conductive fiber.

15.The device according to Claim 1 wherein said antenna structure is electrically connected to said integrated circuit die.

16.The device according to Claim 15 wherein said electrical connection is by direct contact between said conductive loaded resin-based material and metal interconnects on a substrate within said chip carrier.

17.The device according to Claim 15 wherein said electrical connection is by direct contact between said conductive loaded resin-based material and external leads of said chip carrier.

18.The device according to Claim 15 further comprising an encapsulating layer between said integrated circuit die and said antenna structure.

19.The device according to Claim 15 wherein said electrically contacting is through an opening in said encapsulating layer.

20. An integrated circuit device comprising:

a chip carrier with an integrated circuit die fixably attached to said chip carrier; and

an EMI shield on said chip carrier and comprising a conductive loaded, resin-based material comprising conductive materials in a base resin host.

21.The device according to Claim 20 wherein the ratio, by weight, of said conductive materials to said resin host is between about 0.20 and about 0.40.

22.The device according to Claim 20 wherein said conductive materials comprise metal powder.

23.The device according to Claim 22 wherein said metal powder is nickel, copper, or silver.

24.The device according to Claim 20 wherein said metal powder is a non-conductive material with a metal plating.

25.The device according to Claim 24 wherein said metal plating is nickel, copper, silver, or alloys thereof.

26.The device according to Claim 23 wherein said metal powder comprises a diameter of between about 3 μm and about 12 μm.

27. The device according to Claim 20 wherein said conductive materials comprise non-metal powder.

28. The device according to Claim 27 wherein said non-metal powder is carbon, graphite, or an amine-based material.

29.The device according to Claim 20 wherein said conductive materials comprise a combination of metal powder and non-metal powder.

30.The device according to Claim 20 wherein said conductive materials comprise micron conductive fiber.

31.The device according to Claim 30 wherein said micron conductive fiber is nickel plated carbon fiber, stainless

steel fiber, copper fiber, silver fiber or combinations thereof.

32.The device according to Claim 30 wherein said micron conductive fiber has a diameter of between about 3 μm and about 12 μm and a length of between about 2 mm and about 14 mm.

33.The device according to Claim 20 wherein said conductive materials comprise a combination of conductive powder and conductive fiber.

34.The device according to Claim 20 wherein said EMI shield is electrically connected to said integrated circuit die.

35.The device according to Claim 34 wherein said electrical connection is by direct contact between said conductive loaded resin-based material and metal interconnects on a substrate in said chip carrier.

36.The device according to Claim 34 wherein said electrical connection is by direct contact between said conductive loaded resin-based material and external leads of said chip carrier.

37.The device according to Claim 34 further comprising an encapsulating layer between said integrated circuit die and said antenna structure.

38.The device according to Claim 34 wherein said electrically contacting is through an opening in said encapsulating layer.

39.The device according to Claim 20 further comprising a conductive wire molded into said EMI shield.

40.The device according to Claim 20 wherein said EMI shield is molded onto said chip carrier.

41.The device according to Claim 20 wherein said EMI shield further comprises a solderable layer of metal.

42. An integrated circuit device comprising:

a chip carrier with an integrated circuit die fixably attached to said chip carrier; and

a heat sink on said chip carrier and comprising a conductive loaded, resin-based material comprising conductive materials in a base resin host.

43.The device according to Claim 42 wherein the ratio, by weight, of said conductive materials to said resin host is between about 0.20 and about 0.40.

44.The device according to Claim 42 wherein said conductive materials comprise metal powder.

45.The device according to Claim 44 wherein said metal powder is nickel, copper, or silver.

46.The device according to Claim 44 wherein said metal powder is a non-conductive material with a metal plating.

47.The device according to Claim 46 wherein said metal plating is nickel, copper, silver, or alloys thereof.

48.The device according to Claim 44 wherein said metal powder comprises a diameter of between about 3 μm and about 12 μm.

49. The device according to Claim 42 wherein said conductive materials comprise non-metal powder.

50. The device according to Claim 49 wherein said non-metal powder is carbon, graphite, or an amine-based material.

51.The device according to Claim 42 wherein said conductive materials comprise a combination of metal powder and non-metal powder.

52.The device according to Claim 42 wherein said conductive materials comprise micron conductive fiber.

53.The device according to Claim 52 wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof.

54.The device according to Claim 52 wherein said micron conductive fiber has a diameter of between about 3 μm and about 12 μm and a length of between about 2 mm and about 14 mm.

55.The device according to Claim 42 wherein said conductive materials comprise a combination of conductive powder and conductive fiber.

56.The device according to Claim 42 wherein said heat sink is molded onto said chip carrier.

57.The device according to Claim 42 further comprising a conductive wire molded into said heat sink.

58.The device according to Claim 42 wherein heat sink further comprises fins or pins to increase surface area.

59.The device according to Claim 42 wherein said heat sink is connected to a ground signal to form a simultaneous EMI shielding function.

60.The device according to Claim 42 wherein said heat sink is bonded onto said chip carrier with an adhesive.

61.The device according to Claim 42 wherein said heat sink is bonded onto said chip carrier by ultrasonic welding.

62.A method to form an integrated circuit device, said method comprising:

providing a chip carrier with an integrated circuit die fixably attached to said chip carrier;

providing a conductive loaded, resin-based material comprising conductive materials in a resin-based host; and

molding said conductive loaded, resin-based material to form an integrated antenna, heat sink, or EMI shield on said chip carrier.

63.The method according to Claim 62 wherein the ratio, by weight, of said conductive materials to said resin host is between about 0.20 and about 0.40.

64.The method according to Claim 62 wherein the conductive materials comprise a conductive powder.

65.The method according to Claim 62 wherein said conductive materials comprise a micron conductive fiber.

66.The method according to Claim 62 wherein said conductive materials comprise a combination of conductive powder and conductive fiber.

67.The method according to Claim 62 wherein said molding comprises:

placing said chip carrier into a mold;

injecting said conductive loaded, resin-based material

into a mold;

curing said conductive loaded, resin-based material; and

removing said chip carrier with said integrated antenna, heat sink, or shield from said mold.

68.The method according to Claim 62 further comprising forming an encapsulating layer between said chip carrier and said integrated antenna, heat sink, or shield.

69.The method according to Claim 62 wherein said molding comprises:

loading said conductive loaded, resin-based material into a chamber;

extruding said conductive loaded, resin-based material out of said chamber through a shaping outlet; and

curing said conductive loaded, resin-based material to form said integrated antenna, heat sink, or EMI shield.

70.The method according to Claim 69 further comprising attaching said antenna, heat sink, or EMI shield to said chip carrier.

71.The method according to Claim 70 wherein said step of attaching is by an adhesive.

72.The method according to Claim 70 wherein said step of attaching is by an ultrasonic welding.